

### **REMARKS**

Reconsideration of this application is requested.

The claims pending for the Examiner's consideration are claims 1-3, 5-7, 9-11, 13-15, 17 and 18.

Reconsideration of the Section 112, 2nd ¶ rejection of claims 5, 6, 13 and 18 is requested.

Claim 13 has been amended to conform with the applicants' disclosure at page 7, line 6.

With regard to claims 5, 6 and 18, the Examiner has objected to the use of "BET" in claims 5 and 18 and "DBP" in claims 6 and 18. These terms are objected to as indefinite. However, the Examiner is respectfully requested to reconsider the objection to the use of these designations as both "BET" and "DBP" are conventionally used in patents and their meanings are fully understood by those in the art. More specifically, it is respectfully submitted that the term "BET" is definite because it is commonly used and very well known to those of ordinary skill in the field. The USPTO has allowed many patents with this phrase. A search of the USPTO database found 1095 granted US patents having the phrase "BET surface area" in the claims (see attached screenshot). Furthermore, the applicants' specification at page 2, line 19 clearly describes how the BET surface area may be determined using an ISO method.

Similarly, the phrase "DBP absorption" is very well known. A search of the USPTO database revealed 130 granted U.S. patents using this term in the claims and a further 35 using the similar phrase "DBP adsorption". Furthermore, the applicants' specification at page 2, lines 22-23 describe how the DBF absorption may be measured.

It is submitted, in the circumstances, that the use of "BET" and "DBP" in applicants' claims should be acceptable. Accordingly, withdrawal of the Section 112, 2nd ¶ rejection is requested.

The Examiner has rejected claims 1-2, 5-7, 9-11, 15 and 17 under Section 102(b) as anticipated by Nakajima (U.S. 2003/0199612) or, in the alternative, as obvious under Section 103(a). With respect, however, it is submitted that the claims define subject matter which is new and unobvious with respect to Nakajima. More specifically, the Examiner will note that the applicants' claims require a pigment having an acid value greater than 8 mg NaOH per gram of pigment. The applicants' specification shows (pages 10 and 11) that Special Black 4™, having an acid value above 8 mg NaOH/g, lost fewer nozzles to blockage than the comparative examples having acid values below 8 mg NaOH/g,

The Examiner refers to Nakajima et al., Pigment 7, and speculates that this pigment has an acid value above 8 mg NaOH/g. Therefore, in the Examiner's reasoning, the present claims are anticipated by or are obvious over Nakajima et al.

However, Nakajima et al. do not mention the acid value of the Pigment Black 7 used therein. Furthermore, according to NationMaster.com, Encyclopaedia, Pigment Black 7 is soot, usually composed of amorphous carbon (copy attached). Therefore Nakajima et al. are vague and certainly have no disclosure of the acid value required by the applicants' claims. In the circumstances, it is submitted Nakajima et al. cannot anticipate the applicants' claims.

Regarding obviousness, Nakajima et al. do not describe the reduction in lost nozzles for the pigments of the present claims as illustrated in Table 2 of the present specification. Thus, the applicants' claims relate to non-aqueous, radiation curable inks having advantages which could not be predicted from Nakajima et al. Accordingly, it is submitted that applicants' claims define subject matter which is both novel over and unobvious from Nakajima et al. Withdrawal of the rejection based on Nakajima is, therefore, requested.

The Examiner has also rejected claims 1-3, 7, 9-11, 15 and 17 under Section 102(e) as unpatentable over WO 03/027162 in view of Ikeda et al. (6,417,283). Reconsideration and withdrawal of this rejection is requested for reasons noted below.

Firstly, it is noted that rejection under Section 102(e) (i.e. anticipation) is not appropriate where references are combined to make the rejection. It appears from the Examiner's comments that an obviousness rejection under Section 103(a) was intended. In any case, however, the Examiner's references do not disclose or suggest the invention defined by the rejected claims.

More specifically, neither WO '162 nor Ikeda et al. disclose or even remotely suggest the use of pigment having an acid value >8 mg NaOH/g as required by the present claims. The references in Ikeda et al. to grafted carbon blacks (as mentioned by the Examiner) are irrelevant because this is by no stretch of the imagination a teaching of a pigment having an acid value greater than 8 mg NaOH/g. Furthermore, neither WO '162 or Ikeda et al. suggests the advantage of decreased nozzle loss which is realized by the presently claimed invention, as shown in Table 2 of the specification. It is, therefore, submitted that the applicants' invention is not, in any sense, anticipated by, or obvious from, WO 043/027162 and Ikeda et al. Withdrawal of the rejection based on these references is, therefore, requested.

It is noted that claims 13, 14 and 18 have been indicated to be allowable subject to elimination of the Section 112 rejection and amendment to include all limitations of the base claim and any intervening claims. The Section 112 rejection is believed to be obviated with the amendment of claim 13 and the comments made relative to the other aspects of this rejection. The dependence of claims 13, 14 and 18 has, however, been maintained as the applicants' base claims (claims 1 and 2) are believed to be allowable for the reasons noted.

The application is thought to be in allowable condition. Accordingly, favorable action is requested.

Respectfully submitted,  
MORGAN LEWIS & BOCKIUS LLP

By   
Paul N. Kokulis  
Reg. No. 16773

Date: December 22, 2006

**Customer No. 09629**  
1111 Pennsylvania Avenue, N.W.  
Washington, D.C. 20004  
Phone: (202) 739-3000  
Facsimile: (202) 739-3001  
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ACLM/"bet surface area": 1095 patents.  
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- | PAT.<br>NO.  | Title  |
|--------------|--|
| 1 7,456,249  | T Catalyst, its preparation and the polymerization of cyclic ethers over this catalyst   |
| 2 7,452,844  | T High surface area, small crystallite size catalyst for Fischer-Tropsch synthesis   |
| 3 7,452,600  | T Silica   |
| 4 7,449,496  | T Stabilized boehmite-derived catalyst supports, catalysts, methods of making and using  |
| 5 7,449,422  | T Catalyst, its preparation and the polymerization of cyclic ethers over this catalyst   |
| 6 7,442,167  | T Catalyst and process for improving the adiabatic steam-reforming of natural gas  |
| 7 7,445,069  | T Fluoride-modified zeolite catalyst   |
| 8 7,445,762  | T Method to partially reduce calcined niobium metal oxide and oxygen reduced niobium oxides  |
| 9 7,442,840  | T Synthesis of severely sterically hindered amine-ether alcohols and diam(ino)polyalkenyl ethers using a high activity powder catalyst |
| 10 7,439,298 | T Pyrogenically produced silicon dioxide powder and silicone sealing compound containing this powder                                   |
| 11 7,439,272 | T Ultraporous sol gel monoliths  |
| 12 7,429,672 | T Process for the direct synthesis of trialkoxysilane  |
| 13 7,429,551 | T Adsorbents for removing heavy metals   |
| 14 7,429,330 | T Method for removing contaminants from fluid streams  |
| 15 7,425,234 | T Iron oxide pigments  |
| 16 7,416,600 | T Silicon-titanium mixed oxide powder produced by flame hydrolysis   |
| 17 7,407,588 | T Method of using stable adsorber granules to remove pollutants from flowable media  |
| 18 7,402,370 | T Single component developer of emulsion aggregation toner   |
| 19 7,399,882 | T Optimized liquid-phase oxidation   |
| 20 7,399,727 | T Zeolite catalyst and method  |

T

- 21 7,390,921 **T** Optimized liquid-phase oxidation
- 22 7,390,911 **T** Method for producing phthalic anhydride
- 23 7,387,671 **T** Iron oxide pigments
- 24 7,384,473 **T** Solid pigment preparations containing anionic and non-ionic surface-active additives
- 25 7,381,852 **T** Process for hydrogenating an aldehyde
- 26 7,381,836 **T** Optimized liquid-phase oxidation
- 27 7,378,369 **T** Nickel supported on titanium stabilized promoted calcium aluminate carrier
- 28 7,378,238 **T** Method for treating biomass for producing cell lysate containing plasmid DNA
- 29 7,377,965 **T** Air filtration media comprising metal-doped silicon-based gel materials
- 30 7,375,048 **T** ZSM-5 additive
- 31 7,371,894 **T** Optimized liquid-phase oxidation
- 32 7,371,337 **T** Zinc oxide powder aggregates present in circular, ellipsoidal, linear and branched form
- 33 7,370,657 **T** Activated carbon-containing sorbent
- 34 7,364,792 **T** Spun-dyed polyurethaneurea fibres, a process for their production and their use for producing fabrics
- 35 7,361,797 **T** Hydrocarbon conversion using nanocrystalline zeolite Y
- 36 7,361,784 **T** Optimized liquid-phase oxidation
- 37 7,361,778 **T** Method for the isomerization of cis-2-pentenitrile to form trans-3-pentenitrile
- 38 7,361,399 **T** Gloss coated multifunctional printing paper
- 39 7,355,084 **T** Method for hydrogenating organic compounds by means of Ru/SiO<sub>2</sub> catalysts
- 40 7,351,393 **T** Star shaped alumina extrudates and catalyst based thereon
- 41 7,351,388 **T** Pyrogenically produced silicon dioxide powder
- 42 7,348,463 **T** Hydrogenation of aromatic compounds
- 43 7,344,796 **T** Fluoroelastomer gasket compositions
- 44 7,344,695 **T** In-situ ZSM-5 synthesis
- 45 7,342,551 **T** Antenna systems for reliable satellite television reception in moisture conditions
- 46 7,342,140 **T** Method for the production of polyetherols
- 47 7,341,976 **T** Stabilized boehmite-derived catalyst supports, catalysts, methods of making and using
- 48 7,338,996 **T** Primer for silicone rubber
- 49 7,335,250 **T** Dental composites based on X-ray-opaque mixed oxides prepared by flame spraying
- 50 7,332,090 **T** Process for the removal of mercury from solutions contaminated with mercury

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- | PAT.<br>NO.  | Title   |
|--------------|---|
| 1 7,427,646  | T Natural rubber, rubber composition and pneumatic tire   |
| 2 7,423,085  | T Carbon black composite material and method of producing the same, and composite elastomer                           |
| 3 7,348,368  | T Pigment-dispersed aqueous recording liquid and printed material   |
| 4 7,345,099  | T Aqueous ink for ink jet printer recording   |
| 5 7,214,263  | T Carbon black and recording liquid using the same  |
| 6 7,204,969  | T High-structure precipitated silicas   |
| 7 7,128,820  | T Process for preparing a non-conductive substrate for electroplating   |
| 8 7,097,818  | T Silica and silicate by precipitation at constant alkali number, and its use   |
| 9 7,091,274  | T Pneumatic tire having a rubber component containing a tin/amino functionalized rubber and an inversion carbon black |
| 10 7,074,457 | T Process for preparing high-whiteness hydrophobic precipitated silica with ultralow moisture absorption              |
| 11 7,060,642 | T Refractory raw materials, method for production thereof and refractory using the material                           |
| 12 7,029,544 | T Conductive pathways in tire treads for reduced static charge buildup  |
| 13 7,022,375 | T High-whiteness hydrophobic precipitated silica with ultralow moisture absorption                                    |
| 14 7,019,065 | T Large sized carbon black particles to reduce needed mixing energy of high hardness, stiff tire compositions         |
| 15 6,960,251 | T Inhomogeneous silicas as carrier material   |
| 16 6,956,080 | T Room temperature crosslinking, one component silicone rubber formulation with hydrophobic silica                    |
| 17 6,945,921 | T Roller for a printer, fax machine or copier   |
| 18 6,827,772 | T Carbon black and compositions containing same   |
| 19 6,818,339 | T Polymer electrolyte type fuel cell  |

- 20 6,800,267 **T** Doped precipitated silica
- 21 6,793,997 **T** Plastic molding having two or more layers and antistatic properties
- 22 6,780,490 **T** Tray for conveying magnetic head for magnetic disk
- 23 6,762,236 **T** Carbon black, process for its production and its use
- 24 6,702,887 **T** Inhomogeneous silicas for elastomer compounds
- 25 6,689,711 **T** Methods of producing oxygen reduction catalyst
- 26 6,683,127 **T** Crosslinkable elastomer composition, sealing material produced from the composition, and filler for use therein
- 27 6,656,997 **T** Product with antistatic properties
- 28 6,613,309 **T** Inhomogeneous silicas in dental care compositions
- 29 6,602,943 **T** Heavy duty pneumatic tire
- 30 6,506,830 **T** Antistatic compositions based on polyamide
- 31 6,506,486 **T** Magnetic recording medium
- 32 6,500,401 **T** Carbon foams and methods of making the same
- 33 6,393,243 **T** Developing roller and developing device using the same
- 34 6,391,274 **T** Carbon black
- 35 6,346,579 **T** Pneumatic tire having a tread compound derived from latex blend
- 36 6,339,122 **T** Vulcanizable rubber composition, in particular for low rolling resistance for vehicle tires
- 37 6,316,537 **T** Product with antistatic properties
- 38 6,290,925 **T** Flowable cyanuric chloride, process for the production thereof and use thereof
- 39 6,262,165 **T** Polyacetal resin composition
- 40 6,251,983 **T** Inversion carbon blacks and method for their manufacture
- 41 6,211,271 **T** Process for producing a vulcanizable rubber composition including carbon black-based and silica-based reinforcing fillers
- 42 6,197,870 **T** Hard-type high-structure carbon black and rubber composition comprising same
- 43 6,193,795 **T** Low structure pyrogenic hydrophilic and hydrophobic metallic oxides, production and use
- 44 6,162,528 **T** Magnetic recording medium and method for manufacturing the same
- 45 6,140,402 **T** Pneumatic tire provided with electrically conductive coating
- 46 6,107,389 **T** Rubber composition for vibration isolating laminate body
- 47 6,099,818 **T** Carbon blacks and process for producing them
- 48 6,095,217 **T** Pneumatic tire including cap layer and base layer
- 49 6,087,434 **T** Pigment composition for liquid toner
- 50 6,056,933 **T** Inversion carbon blacks and method for their manufacture

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- | PAT. NO.     | Title  |
|--------------|--|
| 1 7,112,618  | <b>T Beaded black</b>  |
| 2 7,097,818  | <b>T Silica and silicate by precipitation at constant alkali number, and its use</b>   |
| 3 6,881,770  | <b>T Rubber composition for tire and pneumatic tire</b>  |
| 4 6,624,230  | <b>T Mixtures comprising a filler and an organosilicon compound</b>  |
| 5 6,576,727  | <b>T Catalyst system for gas phase polymerization of conjugated dienes</b>   |
| 6 6,562,883  | <b>T Process for preparing carbon-black-filled rubber powders based on aqueous polymer-latex emulsions</b>   |
| 7 RE37,890   | <b>T Controlled delivery compositions and processes for treating organisms in a column of water or on land</b>                                     |
| 8 6,391,328  | <b>T Controlled delivery compositions and processes for treating organisms in a column of water or on land</b>                                     |
| 9 6,346,262  | <b>T Controlled delivery compositions and processes for treating organisms in a column of water or on land</b>                                     |
| 10 6,337,078 | <b>T Controlled delivery compositions and processes for treating organisms in a column of water or on land</b>                                     |
| 11 6,143,448 | <b>T Electrode materials having carbon particles with nano-sized inclusions therewithin and an associated electrolytic and fabrication process</b> |
| 12 6,122,876 | <b>T Carbon black pellets and a process for the production thereof</b>   |
| 13 6,111,008 | <b>T Tire with silica reinforced tread which contains specified carbon black</b>   |
| 14 6,053,226 | <b>T Rubber composition reinforced with silica and tire with tread thereof</b>   |
| 15 6,013,737 | <b>T Diene rubber composition</b>  |
| 16 5,993,527 | <b>T Ink-jet color recording process and ink set therefor</b>  |
| 17 5,967,211 | <b>T Tire tread for ice traction</b>   |
| 18 5,902,596 | <b>T Controlled delivery compositions and processes for treating organisms in a column of water or on land</b>                                     |
| 19 5,885,605 | <b>T Controlled delivery compositions and processes for treating organisms in a column of water or on land</b>                                     |

- 20 5,858,386 **T** Controlled delivery compositions and processes for treating organisms in a column of water or on land
- 21 5,858,384 **T** Controlled delivery compositions and processes for treating organisms in a column of water or on land
- 22 5,846,553 **T** Controlled delivery compositions and processes for treating organisms in a column of water or on land
- 23 5,798,405 **T** Tire with tread of rubber composition containing two different carbon blacks
- 24 5,723,531 **T** Rubber composition and tire having tread thereof
- 25 5,698,210 **T** Controlled delivery compositions and processes for treating organisms in a column of water or on land
- 26 5,480,626 **T** Method for producing spherical granulated materials from powdered solids and granulated materials produced thereby
- 27 5,360,690 **T** Two-component developer
- 28 5,128,395 **T** Rubber composition for laminated vibrationproofing structure
- 29 5,087,436 **T** Recovery of commercially valuable products from scrap tires
- 30 4,791,016 **T** Stretched polycarbonate films filled with carbon black
- 31 4,640,952 **T** Pneumatic tire having all-weather running performances
- 32 4,624,977 **T** Rubber composition for use in a tire tread
- 33 4,417,005 **T** Rubber compositions for tire treads
- 34 4,309,318 **T** Tread compositions for tires having low rolling resistance
- 35 4,164,423 **T** Black pigmented UV hardening printing ink
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## Encyclopedia > Pigment Black 7

**Soot**, also called **lampblack**, **Pigment Black 7**, or **carbon black**, is a dark powdery deposit of unburned fuel residues, usually composed mainly of amorphous carbon, that accumulates in chimneys, automobile mufflers and other surfaces exposed to smoke—especially from the combustion of carbon-rich organic fuels in the lack of sufficient oxygen.

Lampblack has been used as the black pigment in paints and inks since prehistoric times, and is still widely inks, toners for xerography, laser printers, and in the chemical industry used as food coloring, e.g. in liquorice sweets. The black color of rut to the use of lampblack as an ingredient in their vulcanisation; this is around 85% of the market use of carbon black.

Lampblack is easily produced experimentally by passing some nonc surface, such as a tin can lid or glass, closely through a candle flame produced in this way is among the darkest and least reflective substance.

Lampblack is also used to coat aluminum foil that has been previously recording drum for use in a recording barograph or other instrument. scratched clear by a pointed stylus. In this case, the sooty smoke is burning a small amount of camphor. After recording the image is fixed the surface with a clear lacquer. Similar coatings were used in direct pendulum seismometers. While not a sensitive instrument these were directly recording the direction of significant horizontal shocks upon plates.

Cigarette smoke contains soot, which clogs up the lungs, and damages the lung tissue to be scarred, reducing its elasticity and thus. Therefore air gets trapped in the lung, as gaseous exchange is not a condition is called emphysema, and can eventually cause death.

Soot is in the general category of airborne particulate matter, and is considered hazardous to the lungs and general health when the particles

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White Pigment   
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 www.globalapoc.com

1 flat stomach rule: why   
 I cut out 2 lbs of stomach fat per week   
 old rule.   
 Annas-Dieting-Blog.com

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WV

than 5 micrometres in diameter, as such particles are not filtered out respiratory tract. Smoke from diesel engines, while composed mostly is considered especially dangerous owing to both its particulate size other chemical compounds present.

Due to the very fine particulate size of carbon black, it is often used : This is any material that incorporated into an adhesive during manufacture increase its flexibility, workability, or distensibility. The addition of the cause a reduction in melt viscosity, lower the temperature of the solid transition, or lower the elastic modulus of the solidified adhesive.

### See also

- Indian ink
- activated carbon
- fullerenes
- plasticizer

Categories: Pigments | Climate forcing agents | Carbon forms



### Results from FactBites:

Soot - Wikipedia, the free encyclopedia (437 words)

- 1 Soot, also called lampfl, **Pigment Black 7**, or carbon fl, is a dark powdery deposit of an usually composed mainly of amorphous carbon, that accumulates in chimneys, automobile surfaces exposed to smoke—especially from the combustion of carbon-rich organic fuel oxygen.
- 2 Lampfl has been used as the fl pigment in paints and inks since prehistoric times, and printing inks, toners for xerography, laser printers, and in the chemical industry.
- 3 The fl color of rubber tires is due to the use of lampfl as an ingredient in their vulcanisat for around 65% of the market use of carbon fl.

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### COMMENTARY

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